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TITLE: Training Program in Breast Cancer Prevention and Therapy for Undergraduate Students

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CONTRACTING ORGANIZATION: University of Illinois  
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<b>13. SUPPLEMENTARY NOTES</b>					
<b>14. ABSTRACT</b> The overall objective of this training program is to provide an opportunity for undergraduate students to spend summer to get exposure to concepts of breast cancer research. We proposed six students to be divided amongst 7-8 faculty members working closely in the area of breast cancer. During the last summer we had introduced the program to the Honors college and GPA program office. During the past summer training period we selected six students from a pool of 10 to the summer training program. Unlike last summer four mentors decided to accept students, each selected one student except one of the mentors selected two students. The students learnt laboratory procedures and prepared a short report at the end of the summer and presented a 20 minute departmental seminar on their accomplishments with the mentor and the PI. One of the students wishes to continue participation next year and wants to join PhD program whereas one student will join dental school the two will join medical school and one is undecided.					
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## **Annual Report:**

**Award No:** DAMD 17-03-1-0387

**Title:** Training Program in Breast Cancer Prevention and Therapy for undergraduate Students

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**Dates:** May 15, 2005 to August 15, 2005 (Summer Training Only)

### **Report:**

The overall objective of this program is to provide training on the concepts and hands-on laboratory exposure to six undergraduate students who have outstanding credentials and are pursuing their BS degree at the University of Illinois with the intention of joining either medical school or further research career. The program is awarded for training during summer only.

#### Task 1: Recruitment of students:

This year the program was advertised in the University News Letter. Moreover the PI contacted the appropriate personnel at the Honors College office and GPPA office for possible trainees. As a result we received several applications. From the pool of applications we selected six students. The program was made available to other institutes also. To this end Miss Sonali Patel from the Illinois Institute of technology, a GPPA student was also recruited. One student, Mr. Daniel Czyz participated in the program last year and worked also on the program this year. He was also invited to present his work at the era of hope meeting in Philadelphia. He presented the work he conducted last year.

#### Task 2: assignment of a mentor:

The students were provided with the names and contact information about the participating faculty members, which included Drs. Mehta, Das Gupta, Mehta RR, Constantinou, Christov, Diamond, Swanson and Salti. Six students completed the training. The students in the program were:

Tian Tan (Sophomore, UIC GPPA) Dr. R.R. Mehta Mentor  
Daniel Czyz (Senior, UIC, Honors) Dr. Andreas Constantinou Mentor  
Sonali Patel (Junior, IIT, GPPA) Dr. R.G. Mehta Mentor  
Arshia Ali (Junior, UIC, Honors) Dr. Konstantin Christov Mentor  
Edgar Staren (Junior, UIC) Dr. T. K. Das Gupta, Mentor  
Ahmad Othman (Sophomer, UIC) Dr. R.R. Mehta Mentor

Task 3: Conduct research:

All students initiated their research with their respective mentors with the administrative responsibilities of Dr. RG Mehta (PI). The students attended a one hour presentation given by Dr. Mehta on the overall concept and the goals of the program. The rest of the time they spent their time in their respective laboratories. All students indicated that the program provided them with an overall idea about research in breast cancer. It gave them hands on experience with cell culture, cell counts, flow cytometry and PCR in some cases. All students were assigned a small project of their own. The results generated were presented as a seminar to the entire department.

Task 4: Completion of training period:

All students prepared and presented their reports in the form of a seminar. They also provided verbal evaluation of the program and indicated that they would be more interested in attending formal 2-3 classes during the summer months to get an overview of the research in different laboratories. This was planned but was not implemented during the first year but will be carried out during the second and third year.

Planned but could not complete:

Rotation for students who are interested in learning more procedures to other laboratories was planned but could not complete due to very short time period during summer.

Accomplishments:

- As proposed six students were selected for the summer training.
- The students were assigned a mentor after their brief discussion with mentors about the type of work each laboratory is doing.
- All the students learnt aseptic procedures, changing media, cell proliferation assays, immunocytochemistry and to some extent western blot analysis
- The students are interested enough in a way that all of them want to return to breast cancer research sometimes.

#### Update and accomplishments of Students from the last year's training

- Neil Patel and Daniel Czyz were invited to present their work (started as summer trainee and continued) at the ERA of Hope meeting in Philadelphia
- Daniel Czyz joined PhD program at Northwestern University, Chicago in Biochemistry
- Pavan Jhaveri joined Baylor Medical School for MD
- Juliana Choi was a GPPA MD student, now started working as a MD, PhD student in the department.

#### Reportable Outcomes:

The students learnt and understood procedures in the laboratories. Since they were all assigned projects, if the results are published in a scientific journal with new additional data, then the student will get the credit.

#### Conclusions:

- The training program is an excellent way to introduce students who are curious to learn about research methods in breast cancer research.
- Our experience suggests that the students who are motivated perform to the best of their ability and feel accomplished that they have learnt new procedures and have clearly indicated that they may want to do research in breast cancer.
- Two of our past students presented their work at the DOD meeting of Era of Hope conference and got an outstanding exposure. One joined a PhD program at Northwestern University.